

shire,\* and the other from the exterior of a timber-house in Rouen, of which part of the embellishments some years back found their way into this country. Both are exceedingly fanciful adaptations of the "vine," and though far from elaborate in finish, effective for the situations they were originally intended to hold.

#### COMPETITION ESTIMATES.

COST OF READING GAOL.

SIR,—We often hear of the "estimates" for public buildings, and you constantly record the amounts tendered in competition; the actual results, however, very seldom meet the public eye.

Accidentally looking through a Brighton paper, the *Guardian*, of Wednesday, the 29th March, I read a letter from Mr. Frewen on the subject of the proposed "new gaol at Lewes." With that letter I have nothing to do, but he adds this postscript, which I forward you, and which gives the two important facts of the estimate, and that the architects were only paid their commission on the amount of the estimate. If I recollect rightly, this Reading Gaol was a competition affair, and the two facts to which I allude may serve to explain some of the secrets of such competitions.—I am, Sir, &c., A. B.

The following is the post-script alluded to:—

"P.S. Since writing the above letter I have received a letter from the Clerk of the Peace of Berks relative to the gaol at Reading, of which the following is a copy.—N.B. There is nothing in this account for land.

Abingdon, 1st March, 1848.

SIR,—Absence from home prevented me receiving your letter till to-day. The gaol at Reading was not built under an estimate; but, after the plans had been arranged, tenders were sent in for building according to schedules of prices, and the work to be measured. The architects, however, were required to calculate what the total cost would be, and they stated 25,000*l.*, upon which they agreed to take their commission, whether more or less. The cost turned out to be as follows:—

Mr. Jay and Messrs. Bakers, for building, according to measure and valuation in schedule prices	£35,835	8	10
Messrs. Cappel and Co., patent cement floors	550	10	0
Claridge and Co., for asphalt work	818	3	0
May, for grates	311	3	0
Smith and Son, for locks, &c.	675	17	9
Thomas and Son, for ditto	173	4	6
Haden and Co., for apparatus to warm and ventilate, and for other engineer's work	1,711	15	0
Pontifex and Walling, for water fittings, &c.	1,329	9	5
Paraday, for gas fittings	594	5	10
Payments for labour and materials for work done under the direction of W. Crickmay after Messrs. Baker left, including internal arrangements, levelling courts, building wall and entrance, &c.	2,811	6	1
Messrs. Scott and Moffatt, architects	1,250	0	0
W. Crickmay, clerk of the works	106	14	0
	£46,622	17	5

I am, your very obedient servant,

(GEO. B. MOULAND,  
Clerk of the Peace of Berks.  
To C. H. Frewen, Esq., M.P.)\*

THE BRITISH MUSEUM.—The number of persons admitted to view the Museum last year (1847), amounted to 830,965, against 750,601 in 1846 and 653,614 in 1845; the number of visits made to the reading-rooms for the purposes of study or research to 67,525 (in 1846 the number of students was about 1,950); the number of visits by artists to the sculpture galleries, to 3,508 (a falling off, as compared with 1846, of 616); and the number of visits to the print rooms to 4,572. The report of the department of printed books shows that about 328,434 volumes were consulted in the course of the year, or 1,121 per diem.

\* An account and illustrations of this church, which has some interesting particulars, will be found in our third volume, page 323.

#### STRENGTH OF BEAMS.

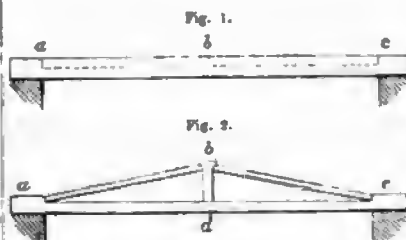
SIR,—Your correspondent "X. Y. Z." requests information as to the following:—

"A church bell with its appurtenances weighing five tons, is to be supported in the middle by a beam, having a clear width between the bearings of 20 feet:—

"Required to know the best form of beam in either of the following materials, and which of these materials is best suited for the purpose, viz., English oak, Baltic timber, or cast iron."

According to the known mathematical formula, based upon practical experiments, we find that an oak beam of 12 inches in depth and 8 inches in breadth, with a distance of 20 feet between the points of bearing, will sustain with safety a weight of a little more than 5 tons.

We find also that a beam of Riga fir of the same dimensions, viz.: 12 inches by 8, with 20 feet between bearings, will support with safety a weight equal to only 3 tons, 3 cwt., 1 qr. But if we cut this fir beam to a depth of 4 inches, in the manner shown by the dotted lines in fig. 1, which is drawn to a scale of 12 feet to the inch, and raise the two pieces AB and CB, and insert a

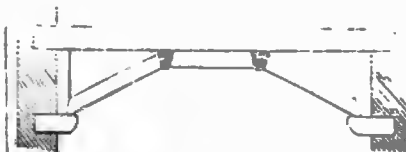


truss BD 2 feet high, as shown in fig. 2, then the strength will be increased sixfold, and the trussed frame-work (made out of the same piece of timber, which would only bear about 3 tons) will support a weight of 3 tons, 3 cwt., 1 qr.  $\times 6 = 18$  tons, 19 cwt., 2 qrs.

If, on the other hand, the oak beam is cut and trussed in the same manner, then will it bear a weight of 5 tons  $\times 6 = 30$  tons.

It may be as well, perhaps, to remark here, that the dimensions of a beam of Riga fir to sustain thirty tons, when cut and trussed, as shown above, will be 12 inches in depth and 12 inches in breadth.

A simple cast-iron beam, 8 inches in depth and 31 inches in breadth, will sustain a weight of 5 tons with safety. This, however, is not to be depended upon for the purpose named. Your correspondent, "X. Y. Z.," will, I think, from the above, be able to see and judge for himself as to the material that may best suit his purpose. C. A., London.



SIR,—I have reason to believe your correspondent "X. Y. Z." would find a beam (to support a bell of 5 tons in the middle of it), if constructed in a similar manner to the accompanying sketch, the most simple and strongest mode he could adopt. It is desirable to render the support of the bell as independent as possible of the walls, by means of a collar and upright posts under the beam.

A SUBSCRIBER.

A MEETING OF METROPOLITAN TRADER DELEGATES was held on Thursday last week, to receive a report of a committee on the depressed state of the working classes. According to that report, about one-third of the 200,000 metropolitan artisans and mechanics are entirely dependant on parochial relief, another third only occasionally employed, and subsisting chiefly on the proceeds of their small stock of furniture, clothes, &c., and only one-third employed—one-half of them only at remunerative wages.

#### LONDON CHURCHYARDS, AND SUGGESTED PROVISIONS.

SIR,—In justice to your excellent periodical, as well as your humble correspondent, I hope you will allow me to mention how exactly the suggestions for "Joint Parochial Cemeteries" in No. 173 (May 30, 1846), anticipated the important resolutions of the London Clergy Committee, under the presidency of the Dean of Manchester.\*

Whilst not presumptuous enough to pronounce that any hint was actually taken from me,—whilst that would be no derogation to high-mindedness and principle,—I may claim the meed, as observed by a brother editor of yours, of a useful pioneer in leading the public mind, through your widely seen pages, to ideas really as important to fair parochial and clerical interests, and private local feelings and time-hallowed associations, as they are, and must be, to public decency and salubrity.

In abatement of which, it is only open that some other joint parochial plans may have been previously offered, though without the writer's knowledge; since he was certainly the first to point out how local divisions and associations might be retained in a junction cemetery. And this might still be added to the well-digested clerical plan, which, beyond that, he will not presume to criticize. Nor is it even necessary for the purpose to substitute the whole for part, as the calculation for 150,000 inhabitants would still answer for any provincial metropolis or district, and it is believed has been remembered in several;† and an eighteen-penny rate, by several yearly instalments, would generally cover the extreme expense.

I much regretted to have made a mistake in the total number of acres in the metropolis and suburbs. But this would not affect accounts of the state of particular churchyards, or a comparison of proportion in twelve parishes; in the subsequent pamphlet, quoted substantially in a leading article of the *Times* last April.

After churchyards, what astonishing cramming may take place in "dissenting and general grounds," might be partly learnt from a visit to one of the extensive family of "Bushill Fields," a little to the right of the Old Kent-road. On a very moderate calculation, fifteen hundred bodies—whilst the number is more likely to be near two thousand five hundred—are deposited in a year in a place very little more than a quarter of an acre!‡ True, "superfluous" decency may be more observed than in some churchyards, and there may be, yet, no complaint in the immediate neighbourhood; but coffins apparently not two days in the earth, "with their cloth as fresh as a birth-day suit," are exposed on the sides of fresh graves: and what must be ever the mystery of such fearful tides without an ebb.—I am, &c.

J. D. PARRY.

March 25, 1848.

\* Vide the *Times* of Thursday, the 23rd inst.

† The dreadful grounds at Leeds, where a powerful instrument, with a strong application, was made to cut through coffins and bodies, either for destruction or merely taking off the head or feet, for "room," and where the grave-diggers were dying off,—or loathsome to approach, as sometimes in London,—have been closed, on the motion of the council, by the Bishop of Ripon, who favourably received the writer's pamphlet. And how many grounds nearly as bad may there not be in Great Britain and Ireland?

Parishes	Burial-ground	Inhabitants
St. Andrew's, Holborn, has one acre to		15,000
St. Bride's		10,000
St. Dunstons		10,000
St. Margaret's, Westminster		20,000
Aldgate		20,000
Whitechapel		20,000
Bethnal-green		20,000
St. Clement Danes		25,000
St. Saviour's, Southwark (at least)		25,000
St. James's, Clerkenwell		20,000
St. Stephen's, Coleman-street		25,000
St. Sepulchre's		25,000

Including together about 250,000 inhabitants, with 17 acres as the limit. Marylebone and St. Pancras have about 16 for 175,000, averaging 17,000 to an acre. In small city parishes, perhaps, the greater average may be rather under 15,000, though the confined situation of course aggravates any insanitary effects, but some would average a much higher, and perhaps a double proportion.—*Urban Burial*, p. 18.

‡ Others such, and larger, as that in Golden-lane. St. Luke's, where the further part is crowded avariciously, and the nearer portion left neat for show, meet, in time, without a check, become great abuses.